

YOR919990302US1

AMENDMENT WITH RCE

00280556aa

Amendment dated 12/21/2004

Reply to office action mailed 09/21/2004

The following is a complete listing of all claims in the application, with an indication of the status of each:

**Listing of claims:**

- 1           1. (currently amended) A computer implemented method of visual  
2           representation of programming objects as graphical elements, wherein  
3           ~~programming program~~ properties of said programming objects are reflected  
4           through graphical properties of graphical elements, the method comprising the  
5           steps of:  
6                 detecting a change in a ~~state~~ program property of a ~~data element~~  
7           ~~representing a~~ programming object in visual representation and shown visually  
8           on a display device as one or more graphical elements, wherein ~~the data~~  
9           ~~element represents a~~ graphical elements represent the programming object ~~as~~  
10          ~~graphical elements~~ and ~~programming program~~ properties of programming  
11          objects are reflected through graphical element properties;  
12                 determining graphical aspect changes that apply to graphical elements  
13          of the programming object appropriate for the change in ~~state~~ a program  
14          property of the programming object; and  
15                 applying the graphical aspect changes to corresponding graphical  
16          elements, wherein the graphical aspect changes include changes in color,  
17          position and size.
- 1           2. (previously presented) A computer implemented method as recited in  
2           claim 1, wherein determining graphical aspect changes further comprises the  
3           steps of:

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4           traversing a list of graphical aspect references to acquire a graphic  
5           aspect for the data element, wherein there is a many-to-one relationship  
6           between graphical aspect references and a graphic aspect; and  
7           for each graphic aspect referenced by the list of graphical aspect  
8           references, determining whether the graphic aspect applies to the change in  
9           state.

1           3. (original) A computer implemented method as recited in claim 1, wherein  
2           the visual representation of a first programming object may include other  
3           visual representations corresponding to at least one additional programming  
4           object logically contained within the first programming object.

1           4. (original) A computer implemented method as recited in claim 1, wherein  
2           more than one visual representation is defined for a programming object.

1           5. (original) A computer implemented method as recited in claim 4, wherein  
2           any of the more than one visual representation may be used for the  
3           programming object.

1           6. (original) A computer implemented method as recited in claim 1, wherein  
2           the visual representation for a superclass of a programming object is used as  
3           the visual representation for a subclass programming object.

1           7. (original) A computer implemented method as recited in claim 6, wherein  
2           a visual representation of a superclass of the programming object is used as a  
3           visual representation for a subclass of the programming object.

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1        8. (currently amended) An apparatus for visual representation of  
2        programming objects as graphical elements comprising:  
3                a data processing system comprising a display device, an interactive  
4        device, as in a keyboard, a pointing device, a storage device, and a data  
5        processor;  
6                memory coupled to the data processor via a bidirectional bus, wherein  
7        the memory includes a first memory section for at least one program and a  
8        second memory section for data;  
9                computer code comprising a visual programming language, wherein  
10       the computer code is stored in the first memory section, and the computer  
11       code detects ~~changes a change~~ in state information corresponding to a data  
12       ~~element that is a visual representation~~ a program property of a programming  
13       object, determines graphical aspect changes that apply to graphical elements  
14       which represent the programming object, and applies ~~graphic aspects~~ graphical  
15       aspect changes to said visual representation of said programming object which  
16       represents the ~~state change~~ of the program property of the programming  
17       object; and  
18                means for displaying ~~the a~~ visual representation of a plurality of data  
19       graphical elements on the display device, wherein displayed graphical  
20       elements represent programming objects and program properties of  
21       programming objects are reflected through displayed graphical element  
22       properties.

1       9. (currently amended) A machine readable medium containing code for  
2       visual representation of programming objects as graphical elements, wherein  
3       programming program properties of said programming objects are reflected

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4 through graphical properties of graphical elements, the code implementing the  
5 steps of:  
6 detecting a change in a ~~state~~ program property of a ~~data element~~  
7 ~~representing~~ a programming object in visual representation and shown visually  
8 on a display device as one or more graphical elements, wherein the ~~data~~  
9 ~~element represents a~~ graphical elements represent the programming object ~~as~~  
10 ~~graphical elements~~ and programming program properties of programming  
11 objects are reflected through graphical element properties;  
12 determining graphical aspect changes that apply to graphical elements  
13 of the programming object appropriate for the change in ~~state~~ a program  
14 property of the programming object; and  
15 applying the graphical aspect changes to corresponding graphical  
16 elements, wherein the graphical aspect changes include changes in color,  
17 position and size.